CLAIMS

- 1. A contrast medium for thrombus which comprises, as an active substance, a substance obtained by labeling a compound capable of binding to glycoprotein IIb/IIIa.
- 2. A contrast medium for thrombus which comprises, as an active substance, a substance obtained by labeling a compound capable of binding to glycoprotein IIb/IIIa selected from compounds represented by the general formula (I):

10 [Chemical Formula 1]

$$R^{1}(X^{1})_{\overline{m}} - A^{1} - C - (Y^{1})_{\overline{n}} - (A^{2})_{\overline{p}} - Z^{1} - A^{3} - R^{2}$$
 (I)

wherein

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R¹ represents an N-containing cycloalkyl radical which may have one or more substituents;

15 R² represents a carboxy or protected carboxy radical;

A¹ represents a lower alkylene, lower alkanyl-ylidene or lower alkenylene radical, each of which may have one or more substituents;
A² represents a lower alkylene radical;

A³ represents a lower alkylene radical which may have one or more substituents;

a moiety represented by

[Chemical Formula 2]



is a N-containing heterocyclic radical represented by the formula:

[Chemical Formula 3]



5 which may have one or more substituents;

X1 represents O, S or NH;

Y¹ represents NH; and

Z¹ represents

[Chemical Formula 4]

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wherein R³ represents a hydrogen atom or a lower alkyl radical; and

m, n and p are the same or different and represent an integer of 0 or 1, respectively;

and a physiologically acceptable salt thereof, compounds represented by the general formula (II):

[Chemical Formula 5]

$$R^{4}-(A^{4})_{r}-C-N-Q^{5}-R^{5} \qquad (II)$$

wherein

R⁴ represents a piperidyl, tetrahydropyridyl, azetidinyl or tetrahydroisoquinolyl radical and these piperidyl, tetrahydropyridyl, azetidinyl and tetrahydroisoquinolyl radicals may have an amino protective group;

R⁵ represents a carboxy or protected carboxy radical;

A⁴ represents a lower alkylene, lower alkanyl-ylidene, lower alkenylene,

cyclo(lower)alkylene or arylene radical;

A⁵ represents a lower alkylene radical which may have one or more substituents or an arylene radical;

10 a moiety represented by

[Chemical Formula 6]

represents a piperidinediyl or tetrahydroisoquinolinediyl radical; and r represents an integer of 0 or 1;

and a physiologically acceptable salt thereof, compounds represented by the general formula (III):

[Chemical Formula 7]

$$R^6-N$$
 A^6
 N
 R^7
 $COOH$
(III)

wherein

20 R⁶ represents a hydrogen atom or an amino protective group; A⁶ represents a lower alkylene or lower alkenylene radical; R⁷ represents a hydrogen atom; a lower alkanoyl radical which may be substituted with amino, lower alkanoylamino, ar(lower)alkoxycarbonylamino, aryl, aroylamino, carboxy, lower alkoxycarbonylamino, ar(lower)alkoxy, lower alkoxycarbonyl, lower alkanoyloxy, lower alkoxy or hydroxyl, among which aryl and aroylamino may further be substituted with carboxy, lower alkoxy or lower alkoxycarbonyl; a lower alkoxycarbonyl radical which may be substituted with lower alkoxy, aryl or cyclo(lower)alkyl; a lower alkenyloxycarbonyl radical; a di(lower)alkylaminosulphonyl radical; a cycloalkanoyl radical which may be substituted with lower alkoxy; an aroyl radical which may be substituted with (C₃-C₆) alkoxy, carbamoyl(lower)alkoxy, N-(lower)alkylcarbamoyl(lower)alkoxy, N,N-di(lower)alkylcarbamoyl(lower)alkoxy, lower alkoxycarbonyl, nitro, cyano, carboxy, carboxy(lower)alkoxy, ar(lower)alkoxy, lower alkoxycarbonyl(lower)alkoxy, cyclo(lower)alkoxy, lower alkoxycarbonylamino, cyclo(lower)alkyl(lower)alkoxy, lower alkanoylamino or lower alkylcarbamoyl; an aryloxycarbonyl radical; a heterocyclylcarbonyl radical; an amino radical which may be substituted with an acyl radical selected from the group consisting of a protected carboxycarbonyl radical and a heterocyclyloxycarbonyl radical;

R⁸ represents a hydrogen atom or an aryl or aralkyl radical which may be substituted with one or more hydroxyl and/or lower alkoxy; a moiety represented by the formula:

[Chemical Formula 8]

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$$\sqrt{}$$

represents a divalent N-containing, 6 to 8-membered heterocyclic radical;

and a physiologically acceptable salt thereof, and

5 compounds represented by the formula (IV):

[Chemical Formula 9]

$$R^9N$$

COOH

COOH

COOH

COOH

wherein R⁹ represents a hydrogen atom or an amino protective group; and a physiologically acceptable salt thereof.

The contrast medium for thrombus according to claim 2, wherein the compound capable of binding to glycoprotein IIb/IIIa is a compound represented by the formula (III-1):

[Chemical Formula 10]

- or a physiologically acceptable salt thereof.
 - 4. The contrast medium for thrombus according to any one of claims 1 to 3, wherein the compound capable of binding to

glycoprotein IIb/IIIa is labeled with a positron emitting isotope.

- 5. The contrast medium for thrombus according to any one of claims 1 to 4, wherein the compound capable of binding to glycoprotein IIb/IIIa is labeled with ¹¹C.
- 5 6. A compound represented by the general formula (IV): [Chemical Formula 11]

wherein R⁹ represents a hydrogen atom or an amino protective group, and a physiologically acceptable salt thereof.

- 7. A method of detecting a thrombus which comprises the steps of administering the contrast medium for thrombus according to any one of claims 1 to 5 to a mammal and detecting a label localized to the thrombus.
- 8. The method according to claim 7, wherein the detection step is carried out by positron emission tomography.